

*AMENDMENTS TO THE SPECIFICATION*

Replace the paragraph beginning at page 7, line 10 with:

Referring to FIG. 2, the controller CTR is coupled to logic units 201 and 205. The controller CTR retrieve operation valid indices OPV1 and OPV2 from the program during the decoding step and these operation valid indices are provided to logic unit 201 and 205, respectively. In case the encoded operation is a NOP operation, the operation valid index is set to false, otherwise the operation valid index is set to true. The register file segments RF1 and RF2 are coupled to unit 201 and 205 respectively, and the corresponding guards GU1 and GU2 can be written from the register file segments RF1 and RF2 to the units 201 and 205, respectively. The guards GU1 and GU2 can be either true or false, depending on the outcome of the operation during which the value of that guard was determined. Units 201 and 205 perform a logic AND on the corresponding operation valid index OPV1 or OPV2, and the corresponding guard GU1 or GU2. The resulting index is delayed according to the pipeline of the corresponding execution unit EX1 and EX2 using registers 209, 211 and 213. After the operation, defined via opcode OC1 or OC2, has been executed by execution unit EX1 and EX2, respectively, the corresponding result data RD1 and RD2 as well as the corresponding output valid index OV1 and OV2 are produced. The output valid indices OV1 and OV2 are true if the corresponding result data RD1 or RD2 are valid output data, otherwise they are false. Unit 203 performs a logic AND on the delayed index, resulting from guard GU1 and operation valid index OPV1, and the output valid index OV1, resulting in a result valid index RV1. Unit 207 performs a logic AND on the delayed index, resulting from guard GU2 and operation valid index OPV2, and the output valid index OV2, resulting in a result valid index RV2. The units 203 and 207 are coupled to multiplexers MP1 and MP2, respectively, via the partially connected network CN, for passing the result valid indices RV1 and RV2 to multiplexers MP1 and MP2. The result valid indices RV1 and RV2 are used to set the write enable index WE1 or WE2 for control of writing result data RD1 or RD2 to the register file segments RF1 and RF2. The write select indices WS1 and WS2 are used by the corresponding multiplexers MP1 and MP2 to select a channel from the connection network CN from which result data have to be written to the corresponding register file segment. In case a result data channel is selected by a multiplexer, the result valid indices RV1 and RV2 are used to set the write enable indices WE1 and WE2, for control of writing result data RD1

and RD2 to the register file segments RF1 and RF2, respectively. In case multiplexer MP1 or MP2 has selected the input channel corresponding to result data RD1, result valid RV1 is used for setting the write enable index corresponding to that multiplexer, and in case the input channel corresponding to result data RD2 is selected, result valid index RV2 is used for setting the corresponding write enable index. If result valid index RV1 or RV2 is true, the appropriate write enable index WE1 or WE2 is set to true by the corresponding multiplexer MP1 and MP2. In case the write enable index WE1 or WE2 is equal to true, the result data RD1 or RD2 are written to the register file segment RF1 or RF2, in a register selected via the write register index WR1 or WR2 corresponding to that register file segment. In case the write enable index WE1 or WE2 is set to false, though via the corresponding write select index WS1 or WS2 an input channel for writing data to corresponding register file segment RF1 or RF2 has been selected, no data will be written into that register file segment. In order to disable the write back of any result data RD1 or RD2 via a given write port of register file segments RF1 and RF2, respectively, the write select index WS1 or WS2 corresponding to that register file segment can be used to select the default input ~~444~~215 from the corresponding multiplexer MP1 or MP2, in which case no result data are written to that register file segment.